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ABSTRACT

This paper outlines the origins and development of the European Community Educational Indicators Project that began in 1992. It reviews past literature relating to the various definitions of an indicator that have been used and the conceptual models that have been adopted. A description of the objectives of the project is followed by an analysis of the information requirements of the European Commission in the areas of education and training. The relationship between the Organisation for Economic Cooperation and Development (OECD) Indicators of Education Systems (INES) Project and the Community Educational Indicators Project is examined, with reference to work in the field of educational indicators in selected member states of the European Union (EU). The paper also identifies the categories that provide the overarching framework for the proposed EU indicators. The appendix contains the proposed new indicators. (Contains 23 references.) (LMI)

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THE ORIGINS AND DEVELOPMENT OF THE EUROPEAN COMMUNITY

EDUCATIONAL INDICATORS PROJECT

by

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ABSTRACT

This paper outlines the origins and development of the Community Educational Indicators Project that began in 1992. It reviews past literature relating to the various definitions of an indicator that have been used and the conceptual models that have been adopted. A description of the objectives of the project is followed by an analysis of the information requirements of the European Commission in the areas of education and training. The methods used to establish these are discussed and key areas of interest to the Commission are highlighted. The relationship between the OECD INES Project and the Community Educational Indicators Project is examined and reference is made to work in the field of educational indicators in selected Member States of the EU. The categories which provide the overarching framework for the proposed EU indicators and the indicators themselves are given.

INTRODUCTION

In recent years there has been increasing interest in the concept of "educational indicators" throughout the developed world. There has been an associated increase in the demand for information about the functioning of educational systems from politicians, policy-makers and consumers of the service.

This demand reflects, at least in the UK and the USA, the desire for greater accountability, and the general concern about "standards" and "value for money" in education (see Tomlinson, Mortimore and Sammons, 1988; Nuttall, 1990). It is allied to calls for greater freedom of information about public services as a whole and for increased participation and power for the consumers of these services. In France a particular emphasis has been given to equity in educational attainment and provision.

More generally, it is also linked with a growing interest in monitoring and evaluating educational systems and a recognition of the potential benefits to be derived from cross-national comparative studies. Increasingly, policy-makers and managers require information with an evaluative dimension concerning aspects of quality as well as quantity. As Nuttall (1990) points out, information about the functioning of education systems has always been a vital tool for planning and monitoring, but during the 1980s there has been a change in the kinds of information required, with the concern today being as much with quality and access as it is with provision:

> *arising from new attitudes which have influenced and changed educational expectations ... As a consequence there has been a search for more sophisticated measurements and assessments of educational products, both quantitative and qualitative* (p 327).

The aim of this paper is to describe the origins and development of the European Community Educational Indicators Project that began in 1992 and was designed to enable a first set of Community Educational Indicators to be produced.

In the section that follows the concept of an "indicator" is discussed. This is followed by an outline of past research that has examined the conceptual framework for educational indicators. The next section provides the background to the Project. An outline of the objectives follows along with the methods and procedures used to meet these objectives. The indicators that have been proposed as the European Union's "core set" of indicators are highlighted and conclusions presented.

DEFINITIONS OF AN INDICATOR

There is a growing body of literature concerning the potential uses of educational indicators for the management and monitoring of the quality of education provided (see Oakes, 1986; Johnstone, 1988; FitzGibbon, 1990; Raudenbush and Willms, 1991, Willms, 1992). Educational indicators are designed to provide summary information about important (policy-relevant) features of the performance or behaviour of an education system as a whole or about significant parts of the system. However, some confusion as to the definition of what constitutes an educational indicator exists (Johnstone, 1988).

It is clear that educational indicators are not just a collection of routine statistics. If all educational statistics were indicators there would be no need for a separate term. Thus Nuttall (1990) argues that "*To be an indicator, an educational statistic must also have a reference point against which it can be judged*" (p 328). For example, appropriate reference points for different indicators might be an agreed standard, a past value or a comparison across institutions, regions or nations.

Johnstone (1988) notes that in the educational research literature, the term indicator has a number of different connotations, including:

- an indicator is something observable or measurable;
- an indicator is a quantity measuring or estimating the level of a single characteristic of a population but in such a way as to remove the effect of the potential of the population to contribute directly to the value calculated (e.g. ratio or percentage measures);
- an indicator makes a general or global comment about a characteristic of a population (indicators should have a comparative element - e.g. for disparities in income, the percentage of the population with two-thirds of the average income could be an indicator of the incidence of poverty).

An indicator system should require all indicators to possess the first two characteristics noted above. For evaluative purposes indicators should also possess the third characteristic of generalizability. In addition, it is worth noting that the purpose and potential use of an indicator must be closely linked to its construction. In other words, the indicator is "fit for the purpose" and is a valid, reliable and meaningful measure.

In summary, the purposes of indicator systems should be to measure the health and effectiveness of the education system, and to assist those engaged in policy decision-making (Oakes, 1986). The latter is of crucial importance; as Nuttall (1990) notes: "*Indicator systems must also produce information useful to the policy community if they are to survive as publicly supported endeavours*" (p. 329).

REVIEW OF CONCEPTUAL MODELS

Van Herpen (1992) provides a detailed review of conceptual models in use for education indicators. From his analysis of a wide range of studies and reports he distinguishes eight different clusters or types of model:

- social indicators of education
- the inductive approach
- policy goals
- manipulable input variables
- division between consumption and production
- compound indicators
- the education system as a whole
- the school as the unit of analysis.

He notes that a number of factors affect such models including:

- the unit of analysis (e.g. micro-level, meso-level and macro-level)
- the scope (e.g. on a sub-system such as HE)
- function (e.g. monitoring system or evaluation)
- purpose (e.g. different indicators are needed for evaluating education systems, educational policies or particular programmes);

Van Herpen also reports that there is no agreed conceptual model for educational indicators and supports Mare (1981), noting that no single conceptual scheme is appropriate because the education system is multidimensional. However, van Herpen concludes that, although there have been numerous proposals over the last 15 years to develop systems of education indicators for different purposes and with different approaches, a large degree of overlap exists in the various conceptual approaches: "*the shared basis of these approaches is an input-process-output model*" (p 45). He also notes that the elements that belong to these three parts of education indicator systems may vary since the distinction between input and process and between process and output is not always made in the same way.

Most reports on educational/performance indicators have stressed that any "outputs" chosen to measure efficiency should reflect the purposes of the educational processes (see for example, DES, 1987). Most emphasise academic achievement, especially examination performance. However, there is also a recognition that attendance, participation, attitudes of clients (both pupils and parents - see for example, OECD, 1990, MacBeath, 1994), aspirations and entry into employment or further or higher education are of relevance (Gray and Jesson, 1990). There is less agreement about the need for student "inputs" (specifically past attainments and socio-economic factors) to be explicitly taken into account in "output" indicators, despite the consensus amongst researchers in the school effectiveness field on the need to take full account of such inputs when comparing school outputs in terms of student achievement (see for example, McPherson, 1993; Mortimore et al, 1988).

Van Herpen also comments that: "*In order to assess the quality of the education system, the data gathered must be comprehensive and linkages between the aspects of schooling must be revealed*" (p 44). Linkages noted include the quality and effectiveness of education systems and productivity and efficiency. It is important that educational indicator systems provide information relating to such linkages if comparisons between different systems, regions, or institutions are to be fair and valid.

Scheerens et al (1988) propose a system for the analysis of school systems under the headings:

- context
- input
- process

- output

Such a schema can be used to look at educational systems as a whole, as well as at the school system in particular.

BACKGROUND TO THE COMMUNITY EDUCATIONAL INDICATORS PROJECT

A preliminary survey was carried out by the Statistical Office of the European Communities (Eurostat) to establish data requirements for the European Community in the area of education and training. This showed that policy makers are increasingly demanding information in the form of statistical indicators. Discussions subsequently took place between the policy Directorate with responsibility for Education, Training and Youth (now called DG XXII, but formerly the Task Force Human Resources, Education, Training and Youth (TFHR)), Eurostat and the Education Committee and the conclusion was reached that there was an urgent need to carry out a comprehensive and systematic inventory of Community educational information requirements.

At the beginning of 1993, the Centre for Educational Research at the London School of Economics and Political Science was commissioned by Eurostat in conjunction with the TFHR to act as consultants to the Commission of the European Communities on a research project the main objective of which was to examine the educational requirements of Community Programmes, actions and support frameworks and translate them into appropriate statistical indicators.

OBJECTIVES OF THE COMMUNITY EDUCATIONAL INDICATORS PROJECT

The Project was carried out in two phases. In the first phase the main objectives were:

- To examine the educational requirements of Community Programmes, actions and support frameworks and translate them into appropriate statistical indicators.

- To develop an overall framework for educational indicators for Community use.

- To examine different educational indicator systems developed in selected Member States and by the OECD in the Indicators of Education Systems (INES) Project.

In the second phase the main aim was:

- To propose a first set of selected Educational Indicators for Community purposes based on the findings of the first phase of the Project.

In the sections that follow, the methods used to meet these objectives are described.

1 Information requirements

As part of the first phase of the project, information was provided by the TFHR about the needs of the Commission. It was reported that there was a growing need within the European Community for an overall framework for educational indicators for current use, and more significantly, for when the Maastricht Treaty was ratified. With a view to the ratification of the Maastricht Treaty, Community action during the first phase of the project was reported to be aimed at developing:

- exchanges of information and experience on issues common to the education systems of Member States (Article 126)

- exchanges of information and experience on issues common to the training systems of Member States (Article 127)

The main information requirements were for educational indicators that would enable differences between Member States and regions within Member States to be determined, and that would establish the extent of differences between particular groups. It should be noted that many of the requirements are concerned with the relationship between Community actions and national policies.

The key information requirements, as identified by the research team on the basis of our contacts and discussions with the Task Force Human Resources, Education, Training and Youth (TFHR), were for indicators that would enable the following differences to be addressed:

- Differences between Member States

- Regional differences

- Differences in access to education and training - differences between males and females, age differences, differences between specific groups of children (e.g. the children of migrants, those with basic skills needs, those with disabilities)

- Differences related to mode of study - e.g. full-time/part-time, traditional/open distance learning (where relevant)

- Vocational education and training

- Language learning in education and training

- Quality of education and training (including responsiveness of national systems to change)

The statistical needs of the various TFHR Programmes/actions (e.g. ERASMUS, LINGUA, PETRA) in place in 1993 were also examined as part of the first phase of the research project. As a result of this exercise, a large number of indicators were proposed for consideration by the whole of the European Commission (West et al, 1993).

During the second phase of the Community Educational Indicators Project, that started late in 1993, a survey of the Directorate-Generals of the Commission was initially carried out, with the aim of producing a manageable and policy-relevant set of indicators to supplement those produced by the OECD INES Project (see below for further details). A questionnaire was developed on the basis of the Community Educational Indicators proposed in the Final Report of Phase 1 of the Project. For each indicator, respondents were asked to state whether it was "*essential*" or not and if so, to give its "*precise policy need*". They were also asked to specify essential classifications that they required (e.g. breakdowns by sex, region).
To maximise the likelihood that all those who might have a requirement for education and training indicators or statistics were consulted, letters and questionnaires were sent to all those Director Generals who it was felt might, either at present or at some stage in the future, have a need for educational and/or training indicators. A total of 27 Directorate Generals and other services were contacted. Nine Directorate Generals and other services responded and a total of

17 questionnaires were returned; in addition, five DGs reported that they had no need for any educational indicators. As noted above, respondents were asked to specify whether indicators were essential or not, and if they were, they were asked to provide a precise policy need. Just over half of the respondents provided general policy needs, whilst nearly one-fifth provided specific needs. Just over a quarter of respondents rarely, if at all, provided any policy needs.

The survey data provided some useful information about which indicators have the highest political relevance. However, because policy needs were not always provided, it did not prove possible to use these responses as the sole means of establishing those indicators with the highest political relevance, although in key areas the responses cited did determine the focus of particular indicators. Because of the lack of precision in the responses that emerged, a decision was made by the research team and Eurostat to propose a set of indicators based on policy issues known to be of interest to the Commission. These were then be discussed with representatives of Eurostat, the Task Force Human Resources, and, at a later date with representatives of national statistical offices from three Member States -France, the Netherlands and England and Wales. As a result of these discussions, certain indicators were deleted, amended and added; calculation formulae were also discussed and where necessary amended accordingly.

2 Overall framework for educational indicators

During the first phase of the Project we suggested that a simple categorisation of educational indicators in terms of whether they are "input/context", "process", or "output" would provide a simple but useful conceptual framework for the presentation of community educational indicators. It should, of course, be acknowledged that, in some cases, outputs at one level of the education system may be viewed as inputs to another level, and thus it is important that this possibility is made explicit if the input-process-output model is adopted. This model was similar to that adopted by Scheerens (1988) and was selected for its simplicity as well as for the logical "flow" that it provides of the education and training system at any level - namely, input, process and output.

During the course of the second phase of the project (see West et al, 1994 for further details), it was decided that a further conceptual framework should be adopted at a superordinate level. Whilst the overall input, process, output model was maintained, a further policy-driven framework was adopted based on the stated policy aims of the Commission and, where feasible, the stated needs of respondents in the survey of Directorate Generals, where there was concordance between the two. These five areas were:

- Features of the education system
- Quality of the education and training system
- Foreign language teaching/European dimension
- Vocational education/training, choices and the labour market interface
- Equality of opportunity and access to education

It should be noted that although the indicators have been grouped broadly in this way, there is a degree of inevitable overlap. The above areas have been addressed by the Commission in various papers and in the Treaty of European Union. The sections that follow highlight specific issues in relation to these areas.

Features of the education system

The educational systems of Member States display a wide diversity in terms of their structure, organisation and administration. Member States vary, for example, in the age at which compulsory education commences and ceases, whether or not pupils are required to repeat years if they do not reach prescribed standards, the types of education - general or vocational - offered at the second level, and the types of qualifications/certificates awarded at the end of second level schooling. There are also differences in relation to requirements for entry to higher education. The way education is administered differs from systems that are largely centrally determined to others where a large role is played by regions or sub-regions or where administration is shared by organisations at a number of different governmental levels.

Although few of these differences are amenable to comparison using indicators, there are some differences that are - for example, the distribution of class sizes in first level schools, the distribution of children from migrant groups in schools and differences in the extent and levels of fees paid for fee-paying education.

Quality of education and training systems

The concept of "quality" in relation to education and training systems is of particular interest within the Community and has been incorporated as part of the Treaty on European Union as noted below:

> *The Community shall contribute to the development of quality education by encouraging co-operation between Member States and, if necessary by supporting and supplementing their action ...* (Article 126 of Chapter 3 of the Treaty on European Union)

Various documents produced by the Commission also make reference to the quality of the education and training systems. The Commission Working Paper (COM (93) 183) on Guidelines for Community Action in the Field of Education and Training makes the following points:

> *The quality of the education and training systems is of paramount importance to the harmonious development of Member States... Severe economic pressures have accentuated the need to find better ways of developing greater capacity to compete in world markets, and of enabling all citizens to realise their full potential, thus creating the basis for a more prosperous and cohesive society.*

The concept of "quality" is a difficult one to operationalise in terms of statistical indicators as it is so broad. Nevertheless, there are a number of pointers to the quality of educational and training systems. Both qualitative and quantitative measure are considered important but it is generally accepted that information that lends itself to quantification (such as attainment results) is more straightforward to collect than qualitative judgements about, say, the quality of teaching and learning.

With reference to outcome measures such as pupils' educational attainment it is important to note the recent developments in analysing and presenting this kind of information. In school effectiveness research multilevel modelling is commonly used to establish the proportion of variation in student attainment scores that is attributable to schools (Nuttall et al, 1989; Goldstein et al, 1993, Thomas et al, 1995). Where possible information about the prior attainment of pupils (e.g. on entry to second level of education) is employed to provide the more appropriate measure of pupils' relative progress in attainment.

Furthermore, in the UK, a variety of individual student background factors such as entitlement to free school meals, which are provided to children of families who are in receipt of state benefits (a crude measure of low family income), gender and ethnicity (the cultural background of the child) are employed in the calculation of school effectiveness measures to account for factors which have a significant impact on student attainment but which are outside the control of the school. In considering the selection of indicators for the quality of education it is necessary to bear in mind the relative merits of measuring absolute attainment versus relative progress in attainment and the need to take account of the school (or regional) context such as student background factors or school factors (e.g. resources).

In terms of the outcomes of the process, then, pointers to the quality of the education and training system can be conceptualised in terms of qualifications received, the levels of literacy and numeracy of the population and so on. In this context it is important to note the range of assessment procedures and certification that exist at the end of upper secondary education in the Member States. Although external examinations are the most frequent means of assessment, internal school examinations are used by a minority of Member States while a further minority base their assessment on internal school certification without any final examination. Where external examinations are used they vary considerably in terms both of the number of subjects that are taken (or have to be taken) and whether continuous assessment counts towards the final grade. These issues need to be taken into account when interpreting indicators of educational quality across the Member States. The indicators that are proposed in this area are those that may, with appropriate contextualisations, be used to assess the quality of the education and training system in broad terms.

Foreign language teaching/European dimension

The teaching of modern foreign languages has been an issue of major importance within the European Community for many years, and the Treaty of European Union reinforces its crucial role:

> *Community action shall be aimed at:*
>
> - *developing the European dimension in education, particularly through the teaching and dissemination of the languages of the Member States;* (Article 126 of Chapter 3 of the Treaty of European Union)

The Green Paper on the European Dimension of Education (COM (93) 457) addresses this issue in some depth:

> *The lack of linguistic proficiency and of knowledge of other cultures is today one of the main obstacles to mobility. How can one move to another country if one has no way of communicating? Linguistic proficiency is thus a pre-requisite for mobility and for exchanges, and a priority for the development of the European dimension in education and the knowledge of other cultures.*

The indicators that are proposed in relation to modern foreign language teaching focus on the mainstream teaching provided and on languages studied by adults. In relation to the European dimension, there is an indicator concerned with the mobility of higher education students.

Vocational education/training, choices and the labour market interface

Vocational training has been an area of considerable importance within the European Community for a number of years. The Community Charter of the Fundamental Social Rights of Workers makes explicit reference to both initial and continuing vocational training:

> *Every worker of the European Community must be able to have access to vocational training and to benefit therefrom throughout his working life. In the conditions governing access to such training there must be no discrimination on grounds of nationality.* (The Community Charter of the Fundamental Social Rights of Workers, text adopted by the Heads of State or Governments of 11 Member States, 9 December 1989)

A number of Commission reports have addressed the issue of vocational training. The Commission Memorandum on Vocational Training in the European Community in the 1990s (1992), notes that the boundaries between basic education on the one hand and training on the other are gradually disappearing in many cases and goes on to say that this dynamic interaction between the two areas of training and education *"will be fundamental for the years ahead"*.

More recently, the Commission Working Paper Guidelines for Community Action in the Field of Education and Training (COM (93) 183) made the following points:

> *...it is recognised that the initial investment in qualifications and skills no longer lasts over the whole of working life. Moreover, many people never get into the cycle of opportunities because of lack of initial qualifications...*

Specifically in the context of initial vocational training, one of the key objectives of the former EC Programme PETRA, was:

> *to support and complement the policies and activities of the Member States aimed at ensuring that all young people, who so wish, receive one or, if possible, two or more years initial vocational training in addition to their full-time compulsory education, leading to a recognised vocational qualification.*

The indicators proposed in this area are designed to provide an overview of vocational education and training at both the initial stages (initial vocational training) in the workplace (continuing vocational training) and as part of training schemes for the unemployed. In addition, they are designed to provide information about the interface between the labour market and education and training.

Equality of opportunity and access

Equality of opportunity and access are addressed in a variety of ways in various Community actions. The Green Paper on the European Dimension of Education (1993) notes that it is important to stress the contribution made by the structural policies of the Community to education in the most disadvantaged regions. More specifically, it comments that the general objectives of schools include contributing towards, amongst other things equality of opportunity for everyone; enabling all young people to achieve their full potential in their working life and in their own personal development, especially by developing in them a taste for life-long learning; and giving their pupils training and qualifications that will facilitate their transition to working life, in particular through being able to master technological change.

Access can also be increased through distance learning. The Commission Working Paper Guidelines for Community Action in the Field of Education and Training (COM (93) 183) notes:

> *...more and more importance is being attached to the idea of providing flexible opportunities of lifelong learning to individuals...*

On the same issue the Green Paper comments:

> *Open and distance learning presents a whole range of possibilities for giving the younger generation the ability to adapt to changes in the workplace or even to retraining, facilitating the transfer of knowledge.*

Moreover, the Treaty of Union also specifically refers to *"encouraging the development of distance education"*. The indicators proposed address equal opportunities and access issues, and particularly as they affect women, children of migrant workers and those with special educational needs.

Women and girls In relation to equality of opportunity generally, the Council Resolution (85/C/166/01) containing an action programme on equal opportunities for girls and boys in education, describes measures to: ensure equal opportunities for girls and boys for access to all forms of education and all types of training in order to enable each individual to develop his or her own aptitudes to the full; to enable girls and boys to make educational and career choices, in full knowledge of the facts and in good time, affording them the same possibilities as regards employment and economic independence; and motivate girls and boys to make non-traditional choices and to follow courses leading to qualifications so that they may have access to a far more diversified range of jobs. Several indicators (shown in Annex 1) are broken down by gender to address this issue.

In relation to vocational training, the Commission's Memorandum on Vocational Training notes that:

> *Within the Community girls and young women should be supported and encouraged to enter higher-quality jobs, which will require longer training and higher qualifications.*

In addition, the Commission recommended in November 1987 (87/567/EEC) that Member States should adopt a policy in order to encourage young and adult women to participate in adult training and should develop specific measures to encourage women to undertake training in areas where women are under-represented.

Children of Migrant Workers The Council resolved in 1974 to take action to improve conditions for the freedom of movement for workers. This was related in particular to the reception and education of migrants' children. Specifically, the resolution made reference to language teaching for children of migrants in the host language in order to permit integration into the host education system and in the mother tongue language so that re-integration into the home country could be facilitated at a later date, if required.

A Directive (77/486/EEC) was adopted on 25 July 1977 on the education of the children of migrant workers. Article 2 of the Directive made reference to the need for Member States to provide for the training and further training of teachers who are to provide tuition in one of the official languages of the host state. Article 3 of the Directive required Member States to take measures to promote the teaching of the mother tongue and the culture of the country of origin

of the children of migrant workers. One indicator is proposed that is concerned with the children of migrants - this aims to provide an initial indication of the concentration of migrant pupils by type of education and by region.

Special Educational Needs The Council and the Ministers of Education in May 1987 (87/C 211/01) reaffirmed *the importance of achieving the maximum possible integration of handicapped children in ordinary schools*. This was followed by a resolution of the Council and the Ministers of Education in July 1990 for Member States (90/C 162/02) to *intensify, where necessary, their efforts to integrate or encourage integration of pupils and students with disabilities, in all appropriate cases, into the ordinary education system, within the framework of their respective education policies and taking due account of their respective education systems.*

In 1993 a Council decision (93/136/EEC) established an action programme to promote equal opportunities for and the integration of disabled people. Amongst the objectives are educational integration and vocational training. One indicator that measures the extent of integration of pupils with special educational needs in the first and second levels is proposed (see Annex 2).

3 Work on indicators in selected Member States of the European Union and in the OECD INES Project

Work on indicators in selected Member States

Details were sought from three Member States on developments in the field of educational indicators. Meetings were held with representatives in France, Germany and Portugal. These countries were selected because it was known that specific developments in the field of educational indicators were taking place. In France, educational indicators are at an advanced stage of development. Details on the current publications and future developments were gathered during the course of discussions with Ministry of Education officials in February 1993. The basic structure of the indicator system used in France is that of costs, activities and attainments, a rather different framework from that of the OECD. There is also an emphasis on presenting regional differences and equality of opportunity (social factors) where this is possible.

In Portugal, a meeting was held in April 1993 with Ministry of Education officials, when the focus was on the extensive computerised information collection system and recent publications of educational statistics. These include more basic educational statistics than educational indicators and were selected according to current issues of importance in education (e.g. number of small schools, population movement from country to urban and coastal areas, population decrease) and those that would answer specific policy questions.

In Germany, the focus was on the Hochschul Information System (HIS), a pilot project aiming to make comparisons of statistical indicators in higher education in selected European countries. Details on the framework that has been developed and the specific indicators that have been proposed were gathered during the course of a meeting held in February 1993. (Full details are given in West et al, 1993.)

During the course of these meetings a number of issues were raised about the areas that should be included in the Community Educational Indicators Project. In particular, representatives of the French Ministry of Education suggested new indicators for several areas including three that are included in final proposals for Community Educational Indicators (vocational training; higher education; the borderline between education and initial/continuing training) and representatives of the Portuguese Ministry of Education mentioned that regional indicators and social class

differences were of particular interest.

The OECD INES Project

The OECD International Education Indicators Project was initiated to develop an international set of indicators that would present, in statistical form, key features of the education systems of the Member countries. The first *Education at a Glance* was published in 1992 and represented the combined effort of several networks and technical groups composed of policy-makers, administrators and researchers. The framework adopted by the INES Project used both conceptual and pragmatic orientations and incorporated policy concerns, and consists of three clusters of education indicators, offering information on:

- the demographic, economic and social contexts of education systems
- features of education systems
- the outcomes of education

The second version of *Education at a Glance* was published in 1993 and future versions are planned. The work of the OECD INES Project has had a major impact on the Community Educational Indicators Project and because of the on-going work of the OECD in this area, the indicators proposed for use by the EU should be seen as supplementary indicators to those being produced by the OECD.

There are, nevertheless, important differences. Suffice to say that although the broad areas covered in the OECD INES Project are of interest to the Commission, there is a need for information that is not provided in *Education at a Glance* - for example, more information on vocational education/training, modern foreign language teaching, access to the education and training system and issues related to equality of opportunity. The Community Educational Indicators Project also differed somewhat from the INES Project in terms of the broad underlying conceptual framework that was adopted (both at the superordinate and subordinate levels) and the terminology used.

4 Proposed Community Educational Indicators

The indicators proposed for the core set of indicators for the European Union fall into the four main categories outlined below:

- Features of the education system
- Quality of the education system
- Foreign languages/European dimension
- Vocational education/training, choices and the labour market

The issues of access and equality of opportunity, mentioned above, permeate the indicators proposed, and are frequently addressed through the breakdowns suggested (see Annex 1).

A total of 21 new Community Educational and Training Indicators were proposed (see Annex 1) to provide the Commission with information relevant to policy on education and training issues, and, where feasible, to meet the needs of the Directorate Generals and in particular DG XXII (the former Task Force Human Resources for Education, Training and Youth). A number

of indicators that are related to the OECD INES indicators were also proposed, as shown in Annex 2.

The proposed indicators can be developed and refined further as policy needs become apparent or change. It is, of course, essential that in an exercise of this type and given the principle of subsidiarity, that Member States of the European Union are consulted about the feasibility of providing data for the proposed indicators where data are not currently available. This process of consultation began in July 1994, at a meeting of the Working Group of Education and Training Statistics in Luxembourg at which the proposed indicators were discussed. It will inevitably take time to establish data availability for these indicators, and in some cases data may not be readily available. However, there are a number of indicators that can be produced using established surveys (such as the Labour Force Survey), and in other cases data may well be available, if not immediately, then at a future date.

In our view, it is important that high quality data are obtained from all Member States, so that appropriate policy decisions can be made, based upon data that are as accurate as practicable. It is also of vital importance that adequate contextual information is provided to enable appropriate interpretations of indicators to be made.

CONCLUSIONS

As can be seen from the above discussion, the educational indicators that have been proposed as Community Educational Indicators, were arrived at using a variety of different methods and procedures. Whilst it is undoubtedly useful to seek the views of data users and the data providers in developing indicators such as these, it is also necessary to have a "policy overview" to ensure that indicators that are proposed are not merely management tools but will assist in the implementation of policy. In our view the proposed indicators should meet this key objective.

Further work, however, would be helpful to address issues of data reliability and the standards employed in data systems across the EU Member States. Indicators are only useful if they accurately reflect the current trends in educational context, provision and attainment within individual Member States and regions as well as providing a basis for valid comparisons across Member States.

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ANNEX I NEW INDICATORS PROPOSED

FEATURES OF THE EDUCATION SYSTEM (ALL INPUT-CONTEXT)

F CP *PERCENTAGE OF CLASSES AT FIRST LEVEL WITH DIFFERENT NUMBERS OF PUPILS*

Percentage of classes in first level education with different numbers of pupils (Breakdown by rural/semi-urban/urban)

F CM *CHILDREN OF MIGRANTS IN SCHOOLS*

Percentage of schools with varying proportions of children with parents from migrant groups (Breakdowns by level - first (ISCED 1) and second (ISCED 2 and 3); by region where school located (NUTS[1] 2/3; by general or vocational education)

F FP *PUPILS IN FEE PAYING EDUCATION AT FIRST AND SECOND LEVELS*

a Percentage of pupils in fee-paying education at first and second levels (Breakdowns by level - first (ISCED 1) second (ISCED 2 and 3); by sex)

b Distribution of fees paid at first and second levels (Breakdowns by day education/boarding education)

F SH *SUBSIDIES TO HIGHER EDUCATION STUDENTS*

a Percentage of students in receipt of higher education subsidies in terms of a) grants, b) loans (Breakdown by grant or loan)

b Distribution of subsidies in terms of a) grants and b) loans to higher education students (Breakdown by grant or loan)

QUALITY OF THE EDUCATION SYSTEM

Q AL *LEVEL OF ADULT LITERACY (OUTPUT)*

Percentage of the adult population with varying levels of literacy (Breakdowns by sex; by age group)

Q AN *LEVEL OF ADULT NUMERACY (OUTPUT)*

Percentage of adult population with varying levels of numeracy (Breakdowns by sex; by age group)

Q ED *EARLY DROP-OUT RATES FROM HIGHER EDUCATION (OUTPUT)*

Percentage of entrants to higher education programmes leaving before the second year of the first year of the programme (Breakdown by sex)

Q SQ *SUBJECT QUALIFICATIONS OF GRADUATES (OUTPUT)*

Percentage of higher education graduates with qualifications in specific subjects (Breakdown by sex)

Q OH *OCCUPATION OF YOUNG PEOPLE WITH HIGHER EDUCATION QUALIFICATIONS (OUTPUT EDUCATION-INPUT LABOUR MARKET)*

a Percentage of young people aged 25 to 34 not currently in higher education and with higher education qualifications

b Percentage of young people aged 25 to 34 and not currently in higher education and with higher education qualifications in different occupations

Q CE *PUBLIC CAPITAL EXPENDITURE PER PUPIL/STUDENT ON EDUCATION (INPUT-CONTEXT)*

Public capital expenditure on education per pupil/student in equivalent currency (Breakdowns by level - first, second, third (ISCED 1, ISCED 2 and 3, ISCED 5, 6 and 7); by type of education - general, vocational; by region (NUTS level 2/3))

FOREIGN LANGUAGES/EUROPEAN DIMENSION

L LS *FOREIGN LANGUAGE TEACHING AT SECOND LEVEL (PROCESS)*

Percentage of enrolled population in second level education receiving teaching in modern foreign European languages (Breakdowns by compulsory second level/post-compulsory second level; by general and vocational)

L LA *LANGUAGES STUDIED BY ADULTS (PROCESS)*

Percentage of adult population (25 to 64) studying a modern foreign European language using traditional (attendance) or distance (correspondence) learning (Breakdowns by age group; by sex; by mode (traditional/open and distance))

L FS *FOREIGN STUDENTS ENROLLED IN HIGHER EDUCATION (INPUT-CONTEXT)*

a Percentage of foreign students enrolled in higher education (Breakdown by sex)

b Distribution of foreign students in higher education (Breakdown by sex)

VOCATIONAL EDUCATION/TRAINING, CHOICES AND THE LABOUR MARKET

V GV *GENERAL EDUCATION AND VOCATIONAL EDUCATION/TRAINING OF YOUNG PEOPLE AT THE SECOND LEVEL (INPUT-CONTEXT/PROCESS)*

a Percentage of enrolled population in second level education (aged 16 to 18) enrolled in a) general education, b) vocational education/training, c) apprenticeships (Breakdowns by sex; by single year of age)

b Percentage of those in vocational education/training who are full-time (Breakdowns by sex; by single year of age)

V ET *PARTICIPATION IN EDUCATION AND TRAINING BETWEEN 16 AND 18 (INPUT-CONTEXT/PROCESS)*

a Percentage of those aged 16, 17 and 18 years old participating in education and training (Breakdowns by single year of age; by sex; by occupational group of parents)

b Percentage of those in vocational education/training who are full-time (Breakdowns by single year of age; by sex; by occupational group of parents)

V LM *LABOUR MARKET, EDUCATION AND TRAINING SITUATION OF 16 TO 25 YEAR OLDS (PROCESS)*

Percentage of 16 to 25 year-olds whose main activity is in a) education/training/apprenticeship, b) employment, c) unemployment, d) national service (Breakdowns by sex; by age group (16-18, 19-21, 22-25); by occupational group of parents)

V EH *EMPLOYMENT STATUS OF THOSE WITH HIGHER EDUCATION QUALIFICATIONS (OUTPUT)*

Percentage of the adult population with higher education qualifications a) in employment, b) unemployed, c) inactive (not seeking employment) not in education; d) in education (Breakdowns by sex; by age group; by region of residence (NUTS 2/3))

V EV *EMPLOYMENT STATUS OF THOSE HAVING COMPLETED VOCATIONAL TRAINING COURSES (OUTPUT)*

Percentage of the adult population having completed vocational training courses (below third level) a) in employment, b) unemployed, c) inactive (not seeking employment) not in education; d) in education (Breakdowns by sex; by age group; by region of residence (NUTS 2/3))

V CV *CONTINUING VOCATIONAL TRAINING SUPPORTED BY ENTERPRISES (PROCESS)*

Percentage of those working in sectors covered by the Continuing Vocational Training Survey (CVTS) participating in continuing vocational training (Breakdowns by sex; by type of CVT; by occupational group)

V CE *CONTINUING VOCATIONAL TRAINING IN ENTERPRISES (PROCESS)*

Percentage of enterprises covered by the CVTS providing continuing vocational training (Breakdowns by size of enterprise; by sector of enterprise)

V TE *TRAINING FOR THE UNEMPLOYED (PROCESS)*

Percentage of adult population (25 to 64) participating in a given year in training under a scheme related to employment (Breakdowns by age group; by sex; by region (NUTS 2/3))

ANNEX 2 INDICATORS RELATED TO OECD INDICATORS

F PT *RATIO OF PUPILS TO TEACHING STAFF IN FIRST AND SECOND LEVELS (RELATED TO OECD INES P 10 EAG 1993) (INPUT-CONTEXT)*

Ratio of pupils to teaching staff in first and second level general education (Breakdown by level (ISCED 1, ISCED 2 and 3))

F ST *RATIO OF STUDENTS TO TEACHING STAFF IN UPPER SECOND LEVEL VOCATIONAL TRAINING AND EDUCATION (RELATED TO OECD INES INDICATOR P 10 EAG 1993) (INPUT-CONTEXT)*

Ratio of students to teaching staff in upper second level vocational education or training

F SE *SPECIAL EDUCATIONAL NEEDS AT FIRST AND SECOND LEVELS (OECD PROPOSING TO PRODUCE AN INDICATOR COVERING THIS AREA) (INPUT-CONTEXT)*

Percentage of enrolled population with special educational needs in first and second level education (Breakdowns by single year of age/age group; by regular school, special class/unit or special school)

F NE *NEW ENTRANTS TO HIGHER EDUCATION PROGRAMMES (RELATED TO OECD INES INDICATOR P 15 EAG 1993) (INPUT-CONTEXT)*

Percentage of new entrants to higher education programmes (Breakdowns by sex; by occupational group of parent, or by highest level of educational attainment of parent(s))

Q DH *DESTINATIONS OF HIGHER EDUCATION LEAVERS (RELATED TO INDICATOR Q OH EAG 1993 and EAG2 R 9 EAG 1992) (OUTPUT EDUCATION/INPUT LABOUR MARKET)*

a Percentage completing higher education (ISCED 5, 6, 7) courses entering a) employment, b) further education/training, c) believed unemployed (six months after completion of course or termination of military/national service) (Breakdown by sex)

b Occupation of higher education leavers entering employment (Breakdown by sex)

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1. NUTS is an acronym for "Nomenclature des unités territoriales statistiques" which is a system for classifying regions. NUTS 1 covers a larger geographic area than NUTS 3 - there are 71 regions at NUTS 1 level, 183 regions at NUTS 2 level and 1044 regions at NUTS 3 level.